

AMENDMENTS TO THE CLAIMS

Please amend claims 1-2, 6-11, 16-22, 27-31, 36-42, 44, 47-51, and 56-58 as follows:

1. (Currently Amended) A computer-implemented method for virtualizing super-user privileges in a computer operating system including multiple virtual private servers, the method comprising:

associating a user with a virtual private server, the virtual private server comprising a plurality of actual processes;

designating the user as a virtual super-user;

~~intercepting a system call, made by the user, for which actual super-user privileges are required; and~~

intercepting a call to the operating system for which actual super-user privileges are required, the call made by a process located in the computer system, the process owned by the user; and

in response to the intercepted ~~system call~~ call to the operating system pertaining to the virtual private server associated with the user:

granting actual super-user privileges to the user; and

allowing execution of the ~~system call~~ call to the operating system.

2. (Currently Amended) The method of claim 1, further comprising:

withdrawing the actual super-user privileges from the user after execution of the ~~system call~~ call to the operating system.

3. (Previously Presented) The method of claim 1, wherein designating comprises:

assigning a virtual super-user identifier to the user.

4. (Previously Presented) The method of claim 3, wherein the virtual super-user identifier comprises a super-user identifier and an indication of the virtual private server.

5. (Previously Presented) The method of claim 1, wherein designating comprises:
assigning a user identifier to the user; and
storing the user identifier and an indication of the virtual private server of the user in a
virtual super-user list.

6. (Currently Amended) The method of claim 1, wherein granting comprises:
assigning a super-user identifier to the ~~virtual super-user~~ user.

7. (Currently Amended) The method of claim 1, wherein the intercepted ~~system call~~
call to the operating system comprises a ~~system call~~ call to the operating system for accessing a
file.

8. (Currently Amended) The method of claim 7, wherein the intercepted ~~system call~~
call to the operating system pertains to the virtual private server associated with the user when
the file to be accessed is associated with the virtual private server.

9. (Currently Amended) The method of claim 1, wherein the intercepted ~~system-call~~ call to the operating system comprises a ~~system-call~~ call to the operating system for terminating a process.

10. (Currently Amended) The method of claim 9, wherein the intercepted ~~system-call~~ call to the operating system pertains to the virtual private server associated with the user when the process to be terminated is associated with the virtual private server.

11. (Currently Amended) The method of claim 1, wherein the intercepted ~~system-call~~ call to the operating system comprises a ~~system-call~~ call to the operating system for terminating all processes associated with the virtual private server, the method further comprising:
identifying each process associated with the virtual private server; and
terminating each identified process.

12. (Previously Presented) The method of claim 11, wherein a data structure stores associations between processes and virtual private servers, and wherein identifying comprises:
identifying each process by its association with the virtual private server in the data structure.

13.-15. (Cancelled)

16. (Currently Amended) The method of claim 1, further comprising:

responsive to the intercepted ~~system-call~~ call to the operating system not pertaining to the virtual private server associated with the user, disallowing execution of the ~~system-call~~ call to the operating system.

17. (Currently Amended) The method of claim 1, further comprising:
responsive to the intercepted ~~system-call~~ call to the operating system comprising a ~~system-call~~ call to the operating system for inserting a module into an operating system kernel, disallowing execution of the ~~system-call~~ call to the operating system.

18. (Currently Amended) The method of claim 1, wherein allowing comprises:
executing the ~~system-call~~ call to the operating system.

19. (Currently Amended) The method of claim 1, wherein intercepting the ~~system-call~~ call to the operating system comprises:
loading a system call wrapper;
saving a pointer to the ~~system-call~~ call to the operating system; and
replacing the pointer to the ~~system-call~~ call to the operating system with a pointer to the system call wrapper, such that the system call wrapper is executed when the ~~system-call~~ call to the operating system is invoked.

20. (Currently Amended) The method of claim 19, wherein the pointer to the first ~~system-call~~ call to the operating system comprises a system call vector.

21. (Currently Amended) A computer program product for virtualizing super-user privileges in a computer operating system including multiple virtual private servers, the computer program product comprising:

program code for associating a user with a virtual private server, the virtual private server comprising a plurality of actual processes;

program code for designating the user as a virtual super-user;

~~program code for intercepting a system call, made by the user, for which actual super-user privileges are required; and~~

program code for intercepting a call to the operating system for which actual super-user privileges are required, the call made by a process located in the computer system, the process owned by the user; and

~~program code for determining that the intercepted system call pertains to the virtual private server associated with the user, granting actual super-user privileges to the user, and allowing execution of the system call~~ call to the operating system, in response to the intercepted call to the operating system pertaining to the virtual private server associated with the user.

22. (Currently Amended) The computer program product of claim 21, further comprising:

program code for withdrawing the actual super-user privileges from the user after execution of the ~~system call~~ call to the operating system.

23. (Previously Presented) The computer program product of claim 21, wherein program code for designating comprises:

program code for assigning a virtual super-user identifier to the user.

24. (Previously Presented) The computer program product of claim 23, wherein the virtual super-user identifier comprises a super-user identifier and an indication of the virtual private server.

25. (Previously Presented) The computer program product of claim 21, wherein program code for designating comprises:

program code for assigning a user identifier to the user; and

program code for storing the user identifier and an indication of the virtual private server of the user in a virtual super-user list.

26. (Previously Presented) The computer program product of claim 21, wherein program code for granting comprises:

program code for assigning a super-user identifier to the user.

27. (Currently Amended) The computer program product of claim 21, wherein the intercepted ~~system-call~~ call to the operating system comprises a ~~system-call~~ call to the operating system for accessing a file.

28. (Currently Amended) The computer program product of claim 27, wherein the intercepted ~~system-call~~ call to the operating system pertains to the virtual private server associated with the user when the file to be accessed is associated with the virtual private server.

29. (Currently Amended) The computer program product of claim 21, wherein the intercepted ~~system-call~~ call to the operating system comprises a ~~system-call~~ call to the operating system for terminating a process.

30. (Currently Amended) The computer program product of claim 29, wherein the intercepted ~~system-call~~ call to the operating system pertains to the virtual private server associated with the user when the process to be terminated is associated with the virtual private server.

31. (Currently Amended) The computer program product of claim 21, wherein the intercepted ~~system-call~~ call to the operating system comprises a ~~system-call~~ call to the operating system for terminating all processes associated with the virtual private server, the computer program product further comprising:

program code for identifying each process associated with the virtual private server; and
program code for terminating each identified process.

32. (Previously Presented) The computer program product of claim 31, wherein an association data structure stores associations between processes and virtual private servers, and wherein program code for identifying comprises:

program code for identifying each process by its association with the virtual private server
in the association data structure.

33.-35. (Cancelled)

36. (Currently Amended) The computer program product of claim 21, further
comprising:

program code for disallowing execution of the ~~system-call~~ call to the operating system in
response to the intercepted ~~system-call~~ call to the operating system not pertaining
to the virtual private server associated with the user.

37. (Currently Amended) The computer program product of claim 21, further
comprising:

program code for disallowing execution of the ~~system-call~~ call to the operating system in
response to the intercepted ~~system-call~~ call to the operating system comprising a
~~system-call~~ call to the operating system for inserting a module into an operating
system kernel.

38. (Currently Amended) The computer program product of claim 21, wherein
program code for allowing comprises:

program code for executing the ~~system-call~~ call to the operating system.

39. (Currently Amended) The computer program product of claim 21, wherein program code for intercepting the ~~system-call~~ call to the operating system comprises:

- program code for loading a system call wrapper;
- program code for saving a pointer to the ~~system-call~~ call to the operating system; and
- program code for replacing the pointer to the ~~system-call~~ call to the operating system with a pointer to the system call wrapper, such that the system call wrapper is executed when the ~~system-call~~ call to the operating system is invoked.

40. (Currently Amended) The computer program product of claim 39, wherein the pointer to the first ~~system-call~~ call to the operating system comprises a system call vector.

41. (Currently Amended) A system for virtualizing super-user privileges in a computer operating system including multiple virtual private servers, the system comprising:

- a virtual super-user designation module for associating a user with a virtual private server, the virtual private server comprising a plurality of actual processes, and for designating the user as a virtual super-user; and
- a system call wrapper for intercepting a ~~system-call, made by the user, for which actual super-user privileges are required~~ a call to the operating system for which actual super-user privileges are required, the call made by a process located in the computer system, the process owned by the user, and, in response to the intercepted ~~system-call~~ call to the operating system pertaining to the virtual private server associated with the user, granting actual super-user privileges to the user and allowing execution of the ~~system-call~~ call to the operating system.

42. (Currently Amended) The system of claim 41, wherein the system call wrapper is further configured to withdraw the actual super-user privileges from the user after execution of the ~~system-call~~ call to the operating system.

43. (Previously Presented) The system of claim 41, wherein the virtual super-user designation module is further configured to assign a virtual super-user identifier to the user.

44. (Currently Amended) The system of claim 43, wherein the virtual super-user identifier comprises a super-user identifier and an indication of the ~~virtual-process~~ virtual private server.

45. (Previously Presented) The system of claim 41, wherein the virtual super-user designation module is further configured to assign a user identifier to the user and store the user identifier and an indication of the virtual private server associated with the user in a virtual super-user list.

46. (Previously Presented) The system of claim 41, wherein the system call wrapper is further configured to assign a super-user identifier to the user.

47. (Currently Amended) The system of claim 41, wherein the intercepted ~~system-call~~ call to the operating system comprises a ~~system-call~~ call to the operating system for accessing a file.

48. (Currently Amended) The system of claim 47, wherein the intercepted ~~system call~~ call to the operating system pertains to the virtual private server associated with the user when the file to be accessed is associated with the virtual private server.

49. (Currently Amended) The system of claim 41, wherein the intercepted ~~system call~~ call to the operating system comprises a ~~system call~~ call to the operating system for terminating a process.

50. (Currently Amended) The system of claim 49, wherein the intercepted ~~system call~~ call to the operating system pertains to the virtual private server associated with the user when the process to be terminated is associated with the virtual private server.

51. (Currently Amended) The system of claim 41, wherein the intercepted ~~system call~~ call to the operating system comprises a ~~system call~~ call to the operating system for terminating all processes associated with the virtual private server, and wherein the system call wrapper is further configured to identify each process associated with the virtual private server and terminate each identified process.

52. (Previously Presented) The system of claim 51, further comprising:
an association data structure for storing associations between processes and virtual private servers, wherein the system call wrapper is further configured to identify each

process by its association with the virtual private server in the association data structure.

53.-55. (Cancelled)

56. (Currently Amended) The system of claim 41, wherein the system call wrapper is further configured to disallow execution of the intercepted ~~system-call~~ call to the operating system in response to the intercepted ~~system-call~~ call to the operating system not pertaining to the virtual private server associated with the user.

57. (Currently Amended) The system of claim 41, wherein the system call wrapper is further configured to disallow execution of the intercepted ~~system-call~~ call to the operating system in response to the intercepted ~~system-call~~ call to the operating system comprising a ~~system-call~~ call to the operating system for inserting a module into an operating system kernel.

58. (Currently Amended) The system of claim 41, wherein the system call wrapper is further configured to execute the ~~system-call~~ call to the operating system.